

definite regularity of suicide mortality pattern and absence of essential changes or fluctuations between the regions. The highest indices have the countries situated on the Northern and Eastern part of the European continent (Lithuania, Russia, Belarus and Hungary). On the opposite pole are the nations settled the Mediterranean and British islands. Thus the fixed gradient in suicide distribution with the growing to the north and north-east of European continent is visible. The same stable vector in suicide spatial distribution is duplicated on the vast territories on the east part of Europe.

**Conclusions:** The data presented support the idea that spatial regularity in suicide distribution in Europe is not generally connected with social and cultural changes occurred during the centuries.

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## **AFFORDABILITY OF CIGARETTES AND SMOKING PREVALENCE**

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**Background:** Cigarettes smoking is the leading cause of chronic diseases, disability and mortality around the world [1]. A large body of research evidence suggests the negative relationship between cigarette prices and smoking prevalence [2]. Furthermore, young adults appeared to be more responsive to increases in cigarette prices [1]. The prevalence of smoking in Belarus is among the highest in the world. During the recent five years, the Belarusian government has adopted a comprehensive range of measures designed to reduce tobacco-related burden. **Objective:** The aim of this paper was to estimate the relationship between tobacco excise taxes, real cigarette prices, cigarettes consumption per capita and smoking prevalence rates in Belarus.

**Methods:** Trends in tobacco excise taxes, real cigarette prices, cigarettes consumption per capita and smoking prevalence rates between 2010 and 2015 were compared.

**Results:** Between 2010 and 2015 excise tax rates and real cigarette prices have increased by 1.5 times, the level of cigarettes consumption per capita decreased by 16%, while the smoking prevalence rates decreased by 6.1% among men and by 9.2% among women. A Spearman correlation analysis suggests a statistically significant negative association between real cigarette prices and cigarettes consumption per capita ( $r=-.099$ ;  $p<0.000$ ). The youngest age groups of both men and women did experienced a greater decrease in the smoking prevalence rates: in the age group 16-19 years old the smoking prevalence rates decreased by 28.9% among men and by 12.7% among women; in the age group 20-29 years the smoking prevalence rates decreased by 10.8% among men and by 30.1% among women. The real cigarette prices were significantly associated with both male and female smoking prevalence rates. The relationship between real cigarette prices and smoking prevalence rates was stronger for the age groups 16-19 and 20-29 years.

**Conclusions:** The results from this study suggest an inverse aggregate-level relationship between real cigarette prices, cigarettes consumption per capita and smoking prevalence rates. The outcomes also indicate that young adults are particularly sensitive to reduction in the cigarette affordability. These findings suggest that the excise tax increase is among the most effective tobacco control strategy.

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## **PROGNOSTIC SIGNIFICANCE OF NRP1 EXPRESSION IN HIGH-GRADE COLON ADENOCARCINOMA**

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**Introduction.** It should be noted that patients with high-grade adenocarcinomas (HGA), even at similar scope and nature of surgical intervention, the effectiveness of the treatment is different: some patients live 5 years or more, while others - die early after treatment on disease progression.

**Purpose.** To determine the value of NRP1 expression in HGA of colon for the prognosis of the disease.

**Material and methods.** Operating material of HGA studied from 17 patients (10 men and 7 women) aged 54.7 to 80.7 years (74.45 (67,14-76,61)). The study was performed on paraffin sections, 3-4 microns thick using mouse monoclonal antibodies to NRP1 (ab81321) by standard methods. Quantification of